09/780490

FIG. 1

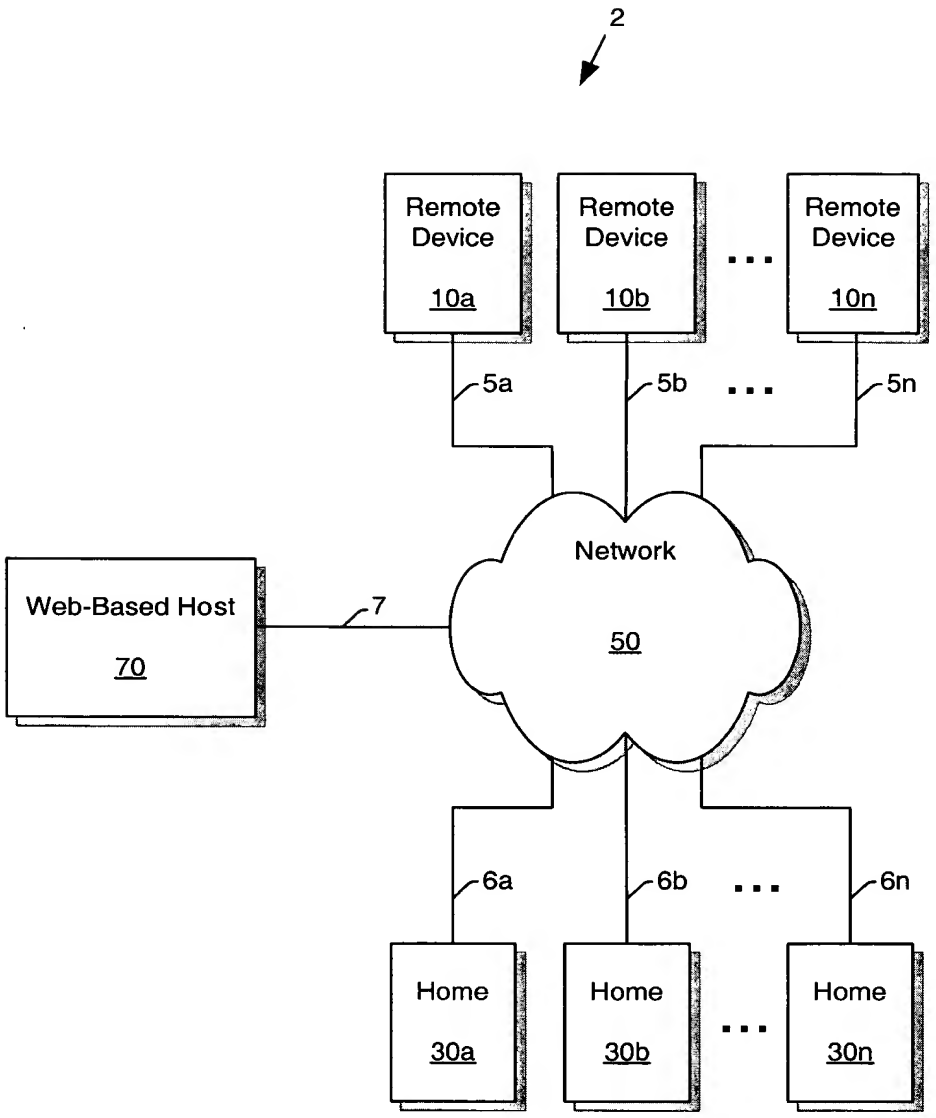


FIG. 2A

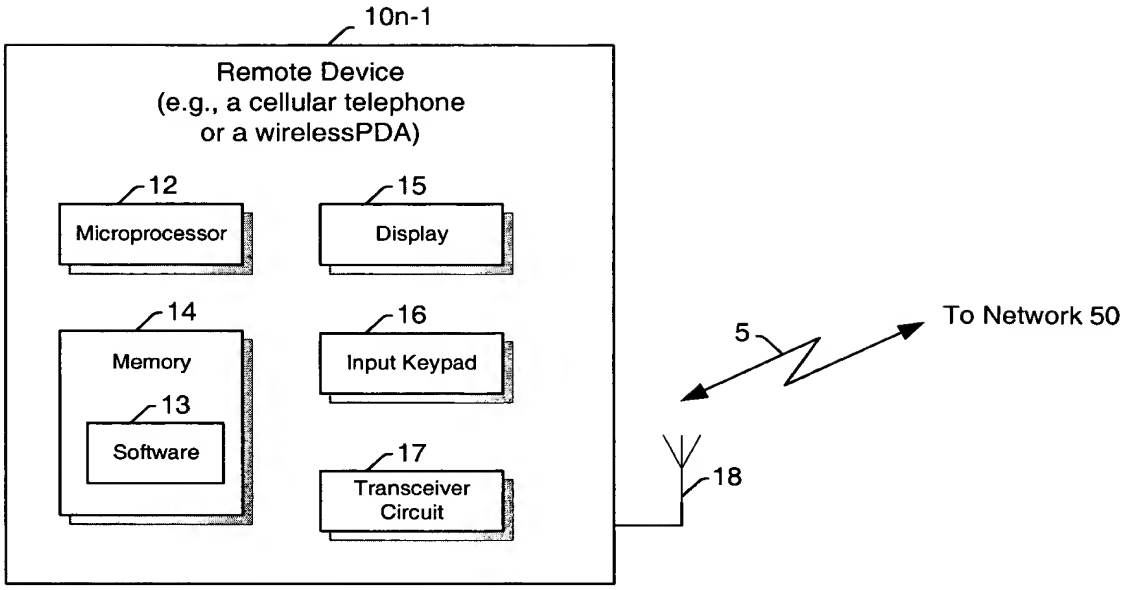

10n-1
Remote Device
(e.g., a cellular telephone
or a wirelessPDA)
12
Microprocessor
15
Display
14
Memory
13
Software
16
Input Keypad
17
Transceiver
Circuit
18
5
To Network 50

FIG. 2B

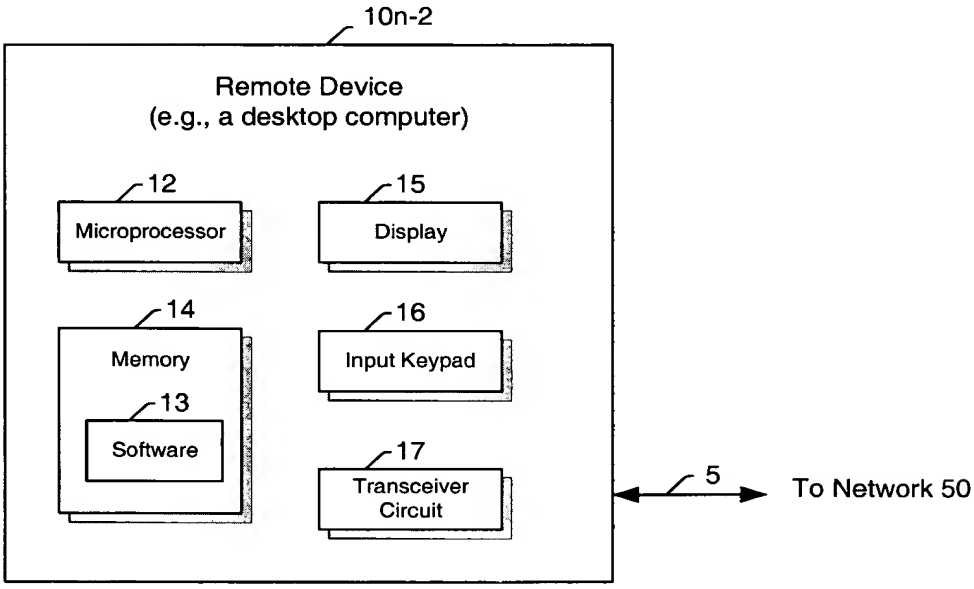

10n-2
Remote Device
(e.g., a desktop computer)
12
Microprocessor
15
Display
14
Memory
13
Software
16
Input Keypad
17
Transceiver
Circuit
5
To Network 50

FIG. 3

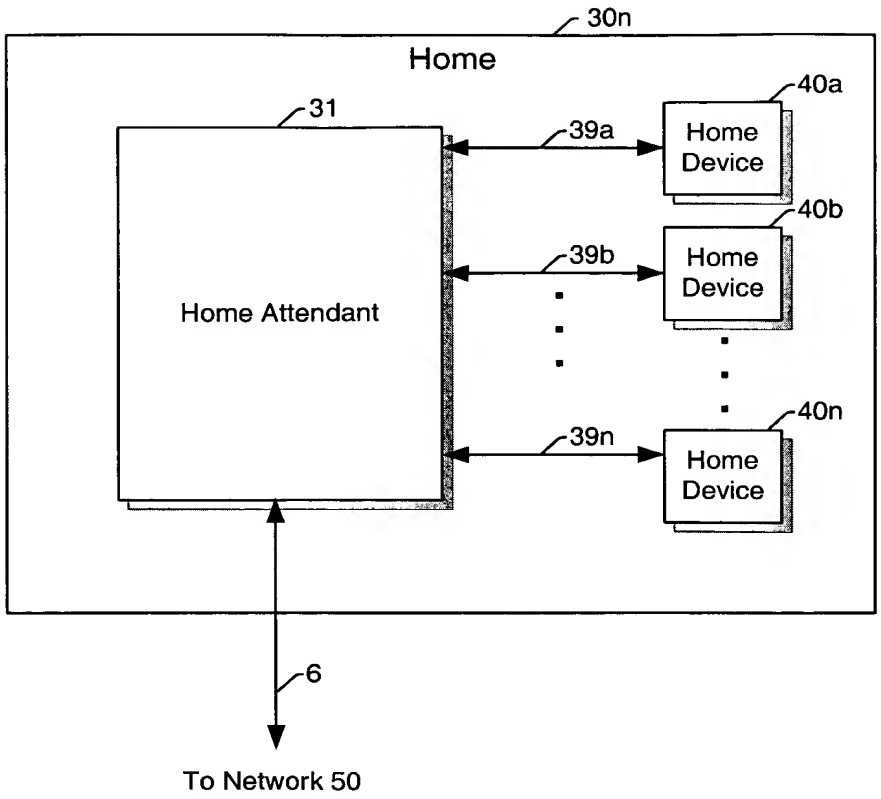

30n
Home
31
Home Attendant
39a
39b
39n
40a
Home Device
40b
Home Device
40n
Home Device
6
To Network 50

FIG. 4A

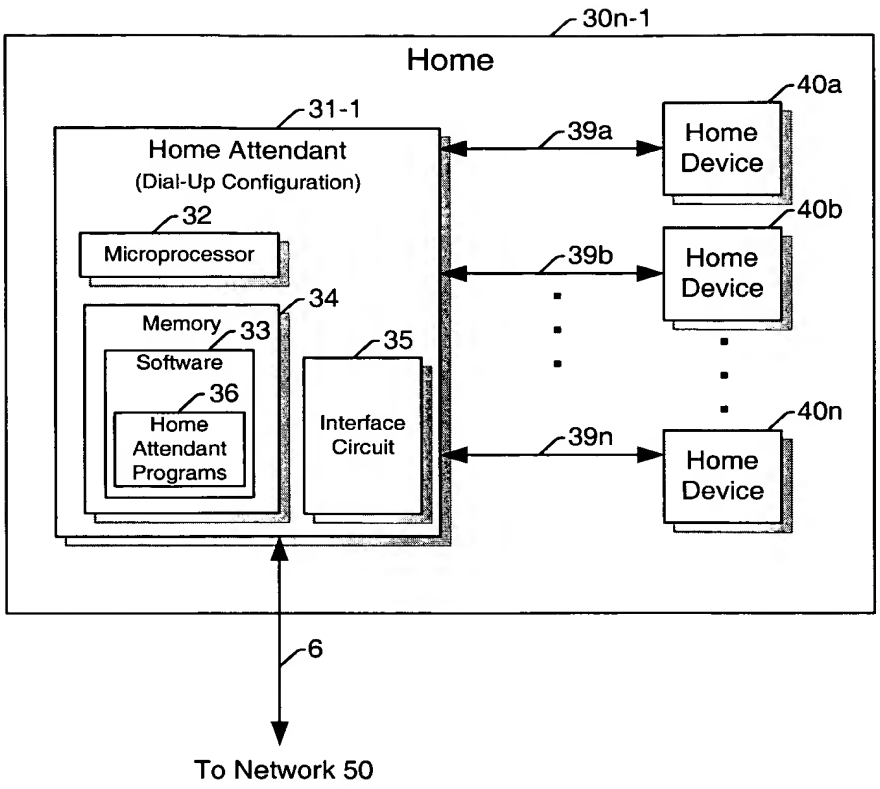

30n-1
Home
31-1
Home Attendant
(Dial-Up Configuration)
32
Microprocessor
34
Memory
33
Software
36
Home Attendant Programs
35
Interface Circuit
39a
39b
39n
40a
Home Device
40b
Home Device
40n
Home Device
6
To Network 50

FIG. 4B

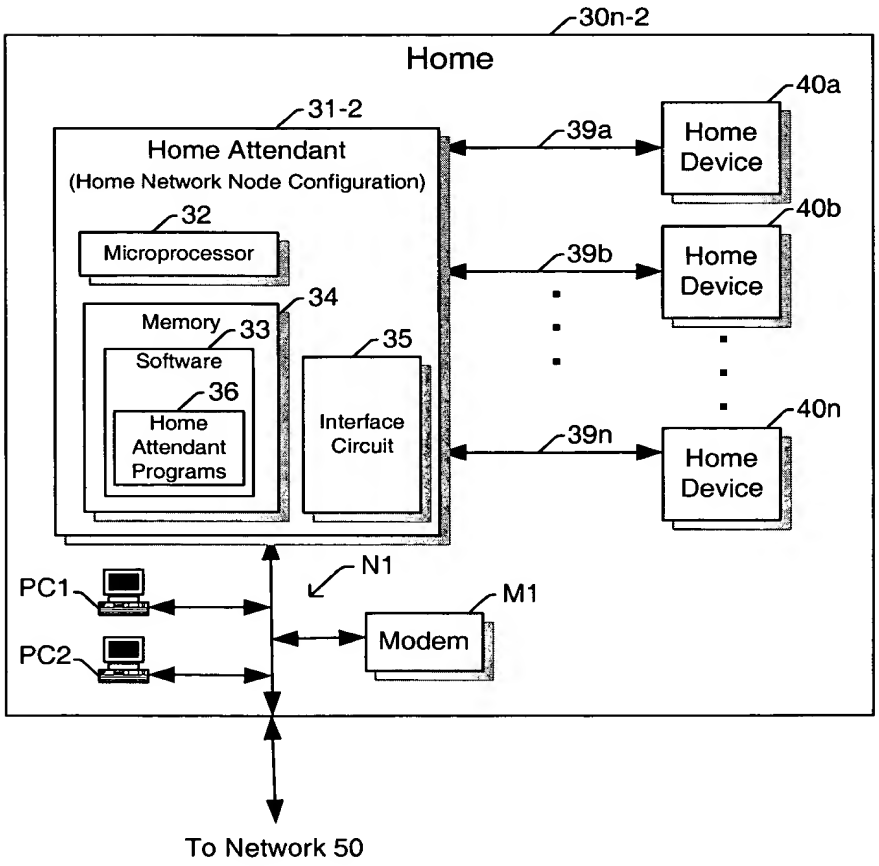

30n-2
Home
31-2
Home Attendant
(Home Network Node Configuration)
32
Microprocessor
34
Memory
33
Software
36
Home Attendant Programs
35
Interface Circuit
39a
39b
39n
40a
Home Device
40b
Home Device
40n
Home Device
N1
PC1
PC2
M1
Modem
To Network 50

FIG. 4C

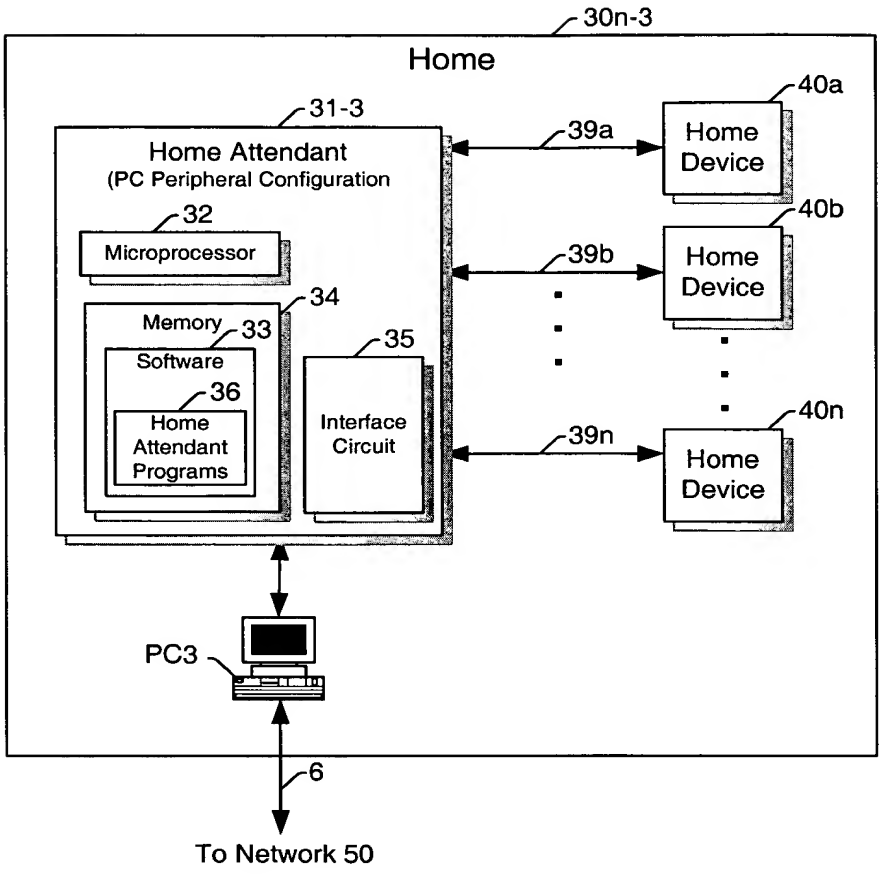

30n-3
Home
31-3
Home Attendant
(PC Peripheral Configuration
32
Microprocessor
34
Memory
33
Software
36
Home Attendant Programs
35
Interface Circuit
39a
39b
39n
40a
Home Device
40b
Home Device
40n
Home Device
PC3
6
To Network 50

FIG. 4D

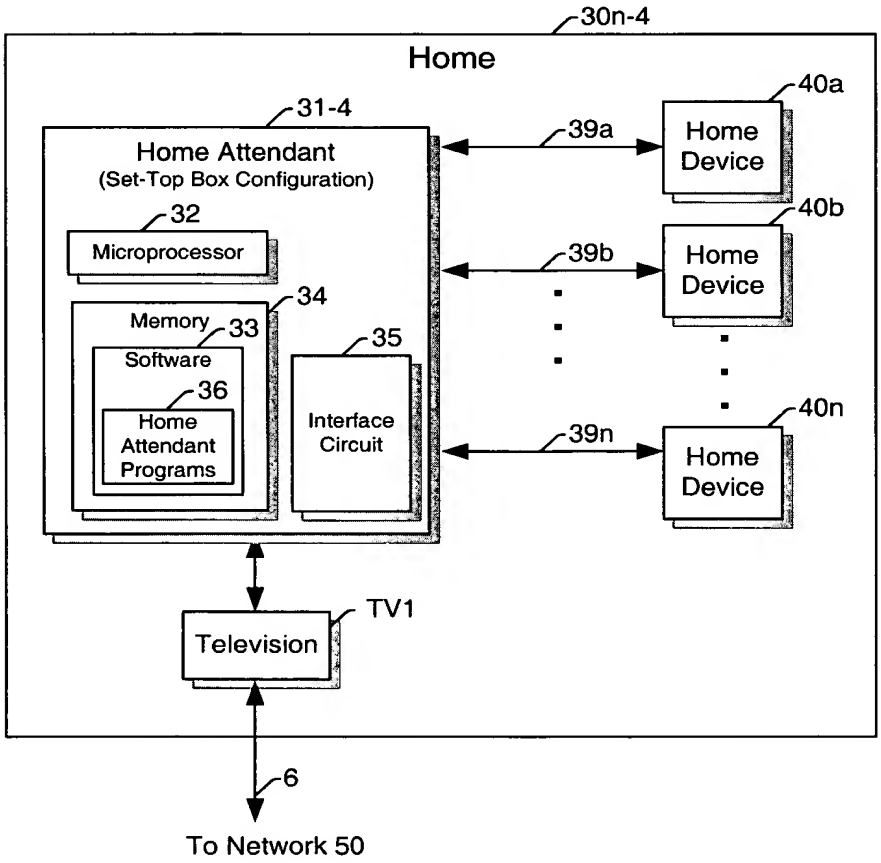

30n-4
Home
31-4
Home Attendant
(Set-Top Box Configuration)
32
Microprocessor
34
Memory
33
Software
36
Home Attendant Programs
35
Interface Circuit
39a
39b
39n
40a
Home Device
40b
Home Device
40n
Home Device
TV1
Television
6
To Network 50

FIG. 5A

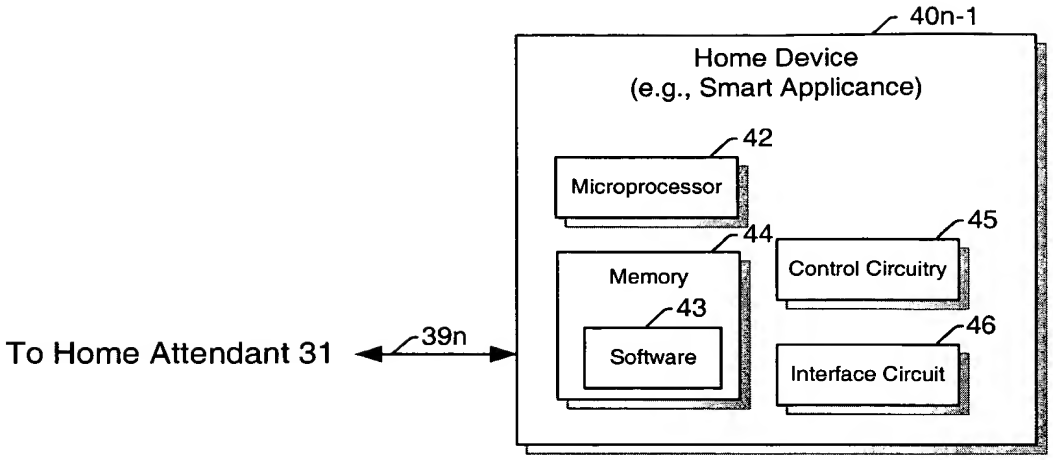

40n-1
Home Device
(e.g., Smart Applicance)
42
Microprocessor
44
Memory
43
Software
45
Control Circuitry
46
Interface Circuit
To Home Attendant 31
39n

FIG. 5B

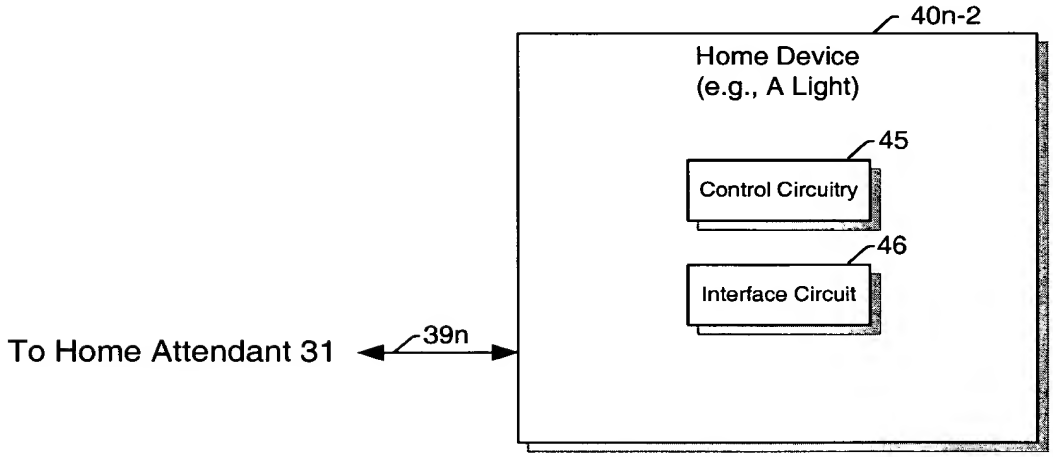

40n-2
Home Device
(e.g., A Light)
45
Control Circuitry
46
Interface Circuit
To Home Attendant 31
39n

FIG. 6

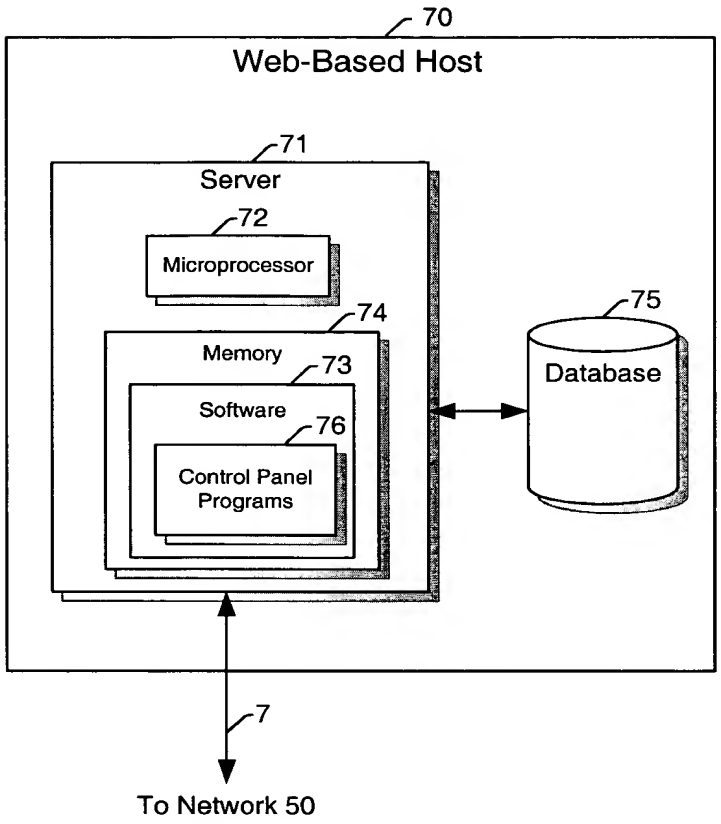

70
Web-Based Host
71
Server
72
Microprocessor
74
Memory
73
Software
76
Control Panel Programs
75
Database
7
To Network 50

FIG. 7

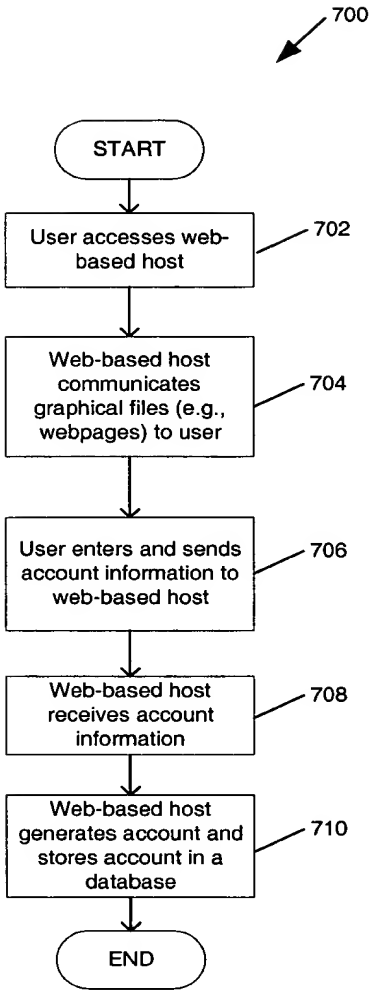

700
START
User accesses web-based host
702
Web-based host communicates graphical files (e.g., webpages) to user
704
User enters and sends account information to web-based host
706
Web-based host receives account information
708
Web-based host generates account and stores account in a database
710
END

FIG. 8

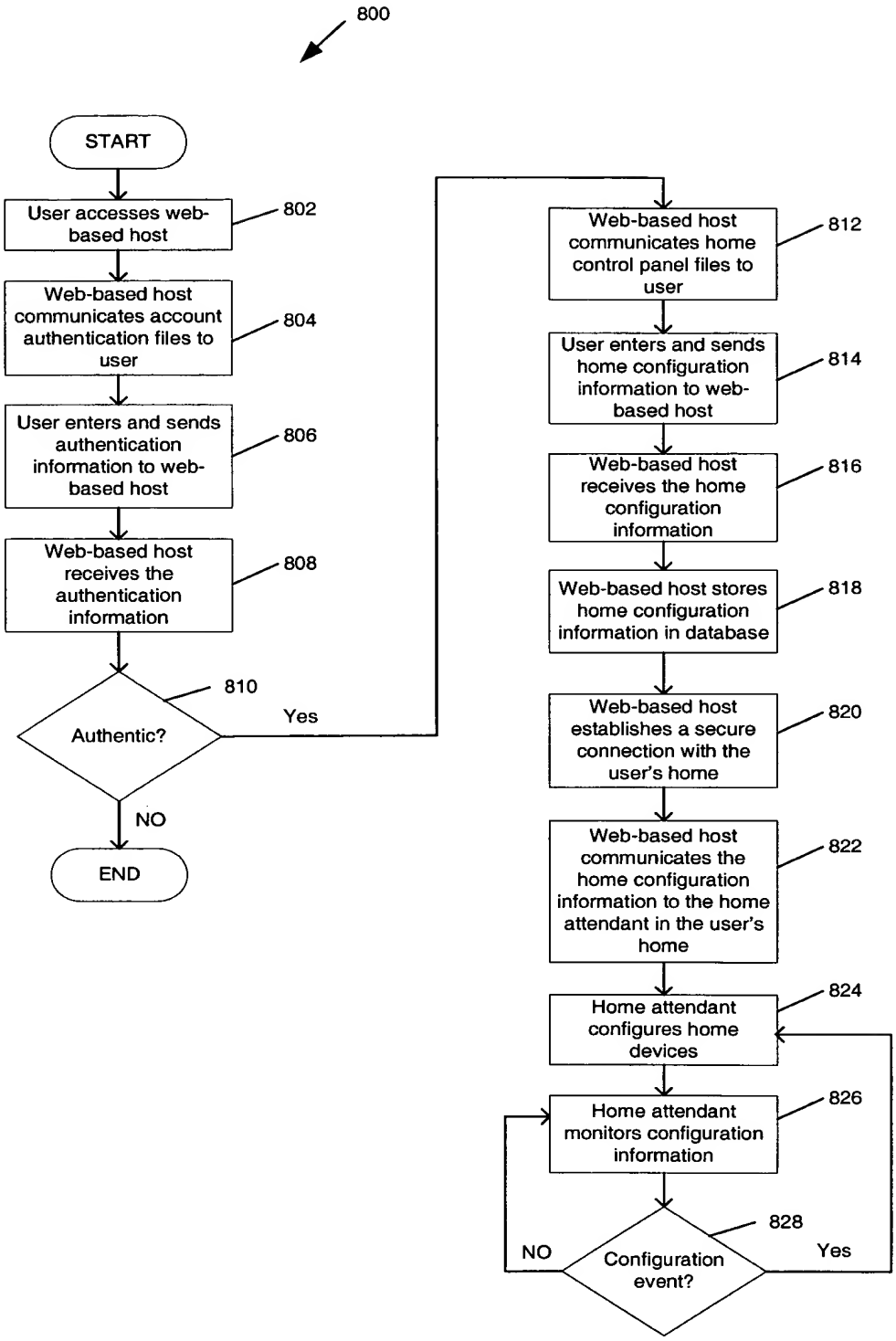

800
START
User accesses web-based host
802
Web-based host communicates account authentication files to user
804
User enters and sends authentication information to web-based host
806
Web-based host receives the authentication information
808
Authentic?
810
Yes
NO
END
Web-based host communicates home control panel files to user
812
User enters and sends home configuration information to web-based host
814
Web-based host receives the home configuration information
816
Web-based host stores home configuration information in database
818
Web-based host establishes a secure connection with the user's home
820
Web-based host communicates the home configuration information to the home attendant in the user's home
822
Home attendant configures home devices
824
Home attendant monitors configuration information
826
Configuration event?
828
NO
Yes

FIG. 9

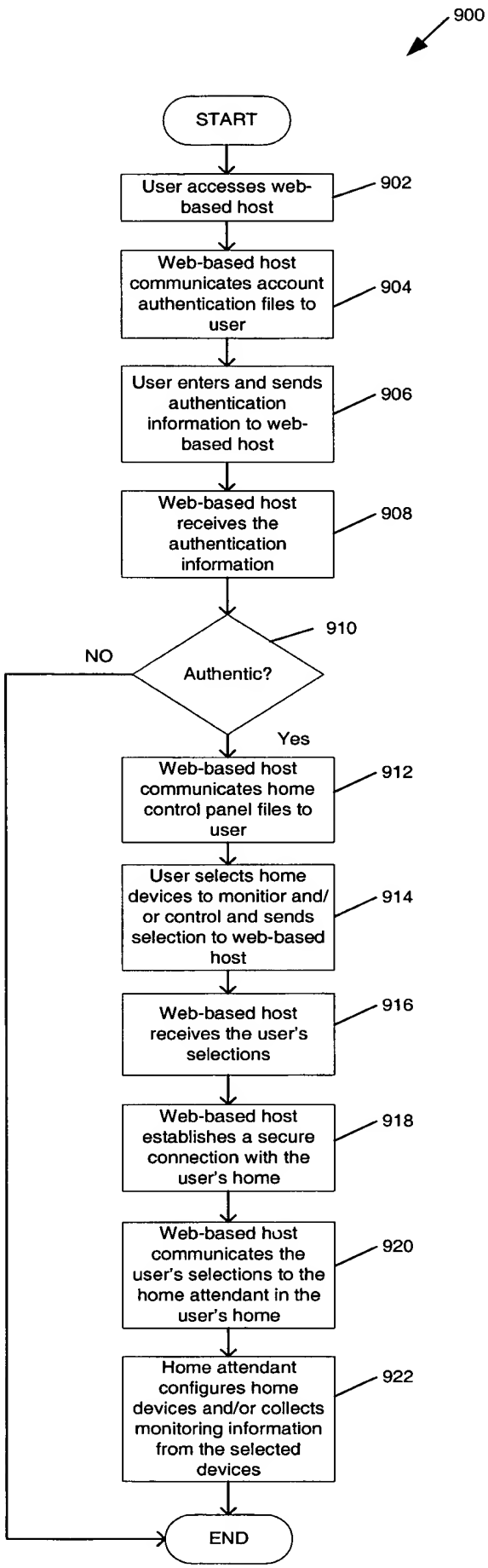

900
START
User accesses web-based host
902
Web-based host communicates account authentication files to user
904
User enters and sends authentication information to web-based host
906
Web-based host receives the authentication information
908
Authentic?
910
NO
Yes
Web-based host communicates home control panel files to user
912
User selects home devices to monitior and/or control and sends selection to web-based host
914
Web-based host receives the user's selections
916
Web-based host establishes a secure connection with the user's home
918
Web-based host communicates the user's selections to the home attendant in the user's home
920
Home attendant configures home devices and/or collects monitoring information from the selected devices
922
END

FIG. 10

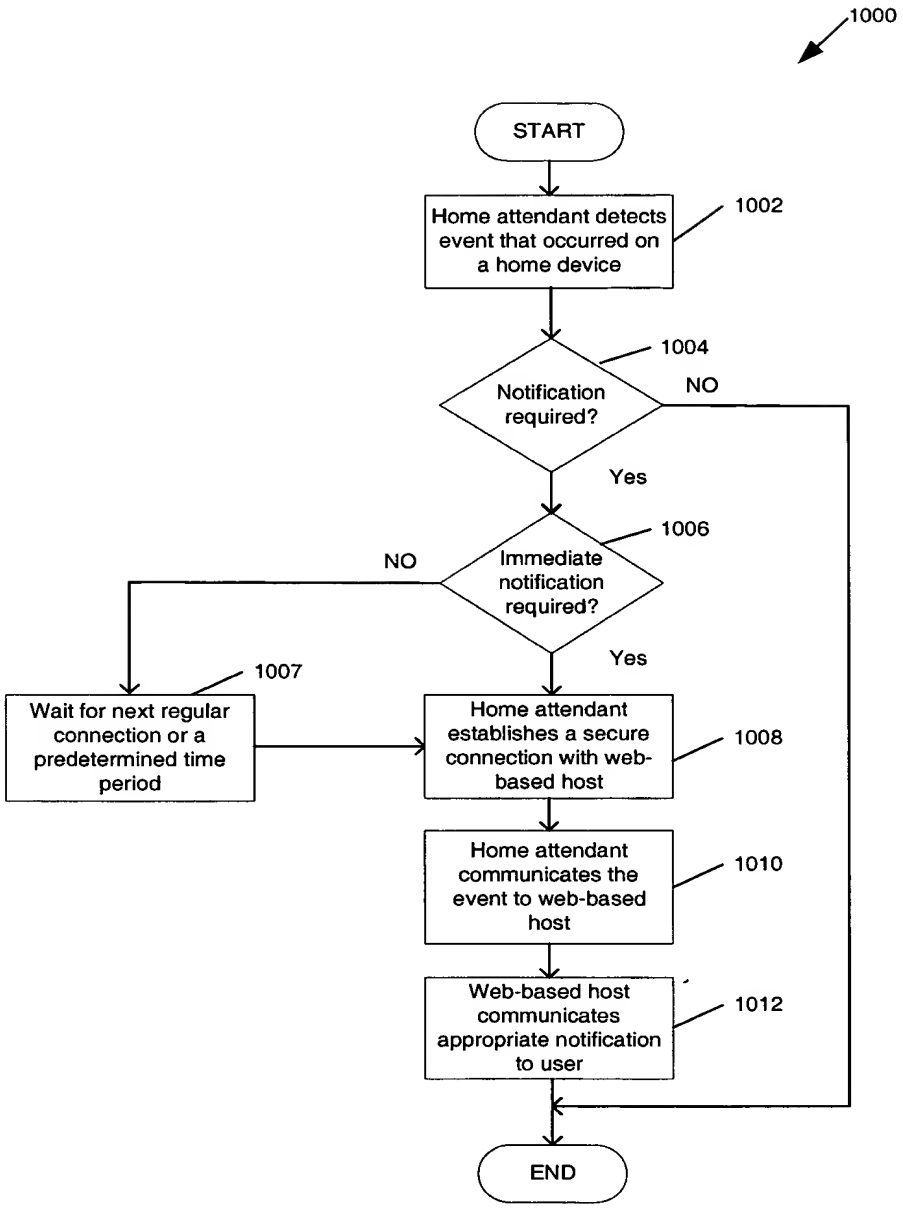
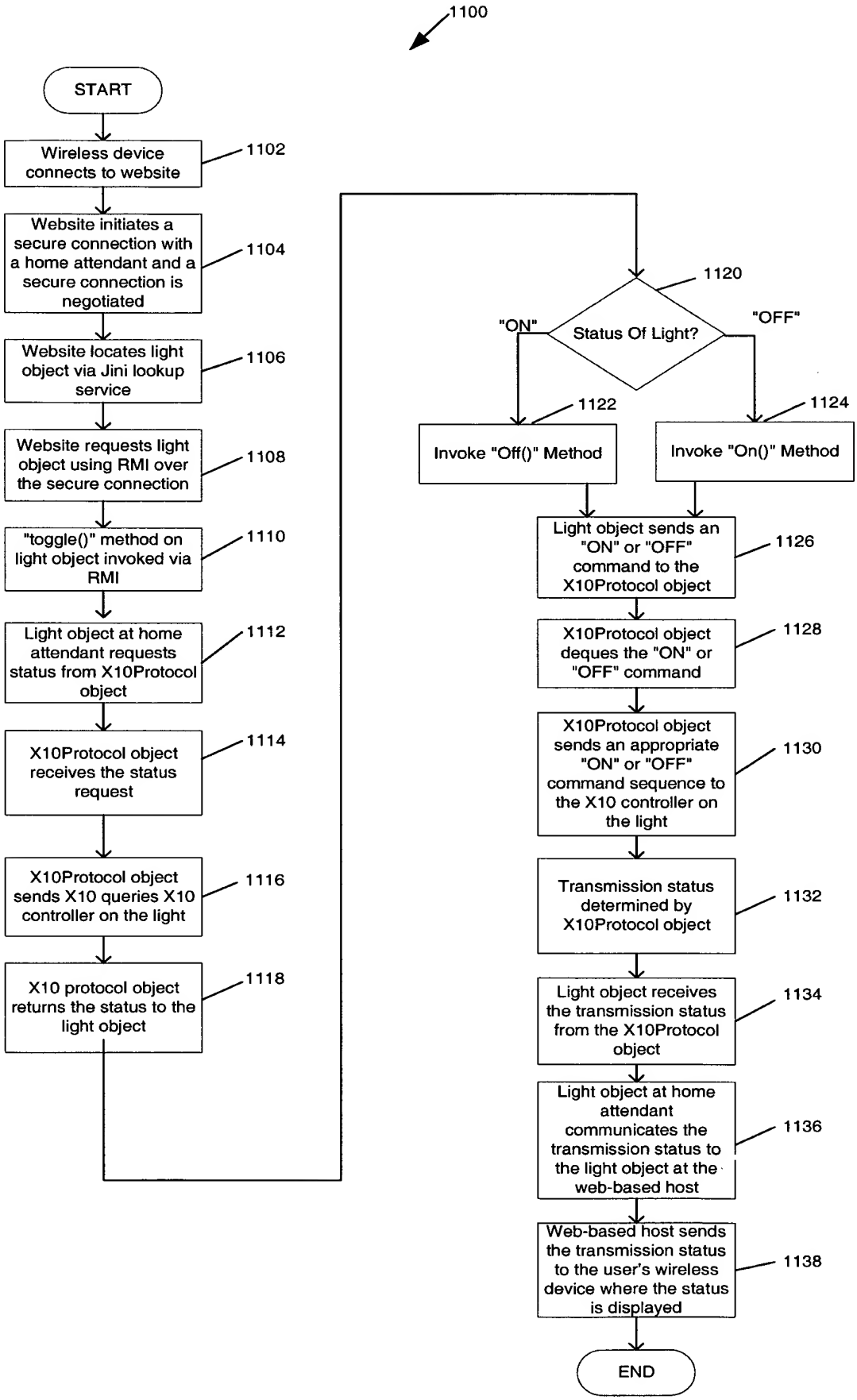

1000
START
Home attendant detects event that occurred on a home device
1002
1004
Notification required?
NO
Yes
1006
Immediate notification required?
NO
Yes
1007
Wait for next regular connection or a predetermined time period
Home attendant establishes a secure connection with web-based host
1008
Home attendant communicates the event to web-based host
1010
Web-based host communicates appropriate notification to user
1012
END

FIG. 11


1100
START
Wireless device connects to website
1102
Website initiates a secure connection with a home attendant and a secure connection is negotiated
1104
Website locates light object via Jini lookup service
1106
Website requests light object using RMI over the secure connection
1108
"toggle()" method on light object invoked via RMI
1110
Light object at home attendant requests status from X10Protocol object
1112
X10Protocol object receives the status request
1114
X10Protocol object sends X10 queries X10 controller on the light
1116
X10 protocol object returns the status to the light object
1118
1120
Status Of Light?
"ON"
"OFF"
1122
Invoke "Off()" Method
1124
Invoke "On()" Method
Light object sends an "ON" or "OFF" command to the X10Protocol object
1126
X10Protocol object deques the "ON" or "OFF" command
1128
X10Protocol object sends an appropriate "ON" or "OFF" command sequence to the X10 controller on the light
1130
Transmission status determined by X10Protocol object
1132
Light object receives the transmission status from the X10Protocol object
1134
Light object at home attendant communicates the transmission status to the light object at the web-based host
1136
Web-based host sends the transmission status to the user's wireless device where the status is displayed
1138
END